Advances in the Management of Post-Radical Prostatectomy Erectile Dysfunction

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The radical prostatectomy has become the most commonly performed major open surgery in urological residency. With the widespread acceptance of the use of prostate-specific antigen for cancer screening, the resultant increase in screening sensitivity, and the relatively "noninvasive" nature of transrectal ultrasound—guided biopsies, there has been a downward stage migration to less advanced disease at the time of diagnosis, and the diagnosis is being made at a younger age and with a longer survival from the time of diagnosis and therapeutic intervention, regardless of the form of intervention chosen by the patient. Improvements in surgical techniques have resulted in better continence and potency rates with less surgical morbidity and mortality. Nevertheless, sexual dysfunction remains the most common and persistent postoperative morbidity. The dysfunction is global, encompassing all domains of sexual function (libido, orgasmic and erectile function), and is predominantly derived from the radical prostatectomy itself. The sexual dysfunction has been created by the surgery and yet is ignored by many urologists, forcing men to give up or seek another opinion elsewhere. In this era of guidelines and consensus-driven medicine, we find ourselves without them for problems resulting from the surgery and which can be devastating for the patient and his partner. Part of the difficulty for urologists is that even if they acknowledge that the problems exist, there is no standardized approach for dealing with them.

In planning this supplement, I focused predominantly on erectile function, as it is the domain about which we can do the most. Using recognized national opinion leaders, I sought to explore critically the technique of radical prostatectomy and its impact on sexual function. In my chapter, I review the types of sexual dysfunctions caused by the radical retropubic prostatectomy (RRP), many of which

exist preoperatively and are only exacerbated by the surgery. Dr Lepor provides a historical perspective and an update on the technique of radical prostatectomy, emphasizing intraoperative technical points useful in minimizing the damage to the diaphanous network of microscopic cavernous nerves. Dr Mulhall discusses the controversies surrounding intraoperative nerve stimulation to locate the neurovascular bundles as well as the use of nerve graft interposition. Drs Lue and Dean discuss exciting new chemical neuroprotective agents, some of which are currently undergoing human clinical trials. Dr Padma-Nathan covers the phosphodiesterase-5 inhibitors and their role in the treatment of postoperative erectile dysfunction (ED), as well as their potential role in the prevention of long-term ED. Dr Kava explores the use of other nonsurgical erectogenic treatment modalities. Finally, Dr Montague presents the challenges involved in the use of penile prosthesis implantation after RRP.

Until we develop evidence-based guidelines or recommendations for the treatment of post-RRP ED, the urologist will continue to treat patients empirically. This supplement to *Reviews in Urology* should allow the urologist to do so with a clearer understanding of the treatment options and a clearer rationale for their application. I have omitted extensive discussion on the laparoscopic and robotic techniques, as they are too new for us to assess their impact on sexual function. Theoretically, many of the concepts put forth in this supplement should apply likewise to those techniques.